CLAIMS

- [c1] 1.A bulk light diffuser material comprising:
 about 95 to about 99.8 percent by weight of a polycarbonate and about 0.2 to
 about 5 percent by weight of light diffusing particles, based on the total weight
 of the polycarbonate and of the light diffusing particles;
 wherein the bulk light diffuser material has a percent transmittance of at least
 70% and a haze of at least 10% measured according to ASTM standard D 100300.
- [c2] 2.The bulk light diffuser material as set forth in Claim 1 wherein the light diffusing particles comprise a poly(acrylate), a poly(alkyl methacrylate), a poly (tetrafluoroethylene), a silicone, zinc, antimony, titanium, barium or mixtures thereof, wherein the alkyl groups have one to about twelve carbon atoms.
- [c3] 3. The bulk light diffuser material as set forth in Claim 1 wherein the light diffusing particles comprise a poly(acrylate), a poly(alkyl methacrylate), a poly (tetrafluoroethylene), a silicone or mixtures thereof, wherein the alkyl groups have one to about twelve carbon atoms.
- [c4] 4.The bulk light diffuser material as set forth in Claim 2 wherein the poly(alkyl methacrylate) comprises poly(methyl methacrylate).
- [c5] 5.The bulk light diffuser material as set forth in Claim 2 wherein the silicone comprises hydrolyzed poly(alkyl trialkoxysilane).
- [c6] 6.The bulk light diffuser material as set forth in Claim 1 wherein the light diffusing particles comprise zinc, antimony, titanium, barium or mixtures thereof.
- [c7] 7.The bulk light diffuser material as set forth in Claim 1 wherein the light diffusing particles comprise zinc, antimony, titanium, barium or oxides or sulfides thereof.
- [c8] 8. The bulk light diffuser material as set forth in Claim 3 wherein the light diffusing particles have a mean particle size of about 1.0 micrometer to about 10.0 micrometers.

- [c9] 9. The bulk light diffuser material as set forth in Claim 3, wherein the light diffusing particles are present in an amount of about 2.2% to about 2.5%.
- [c10] 10.The bulk light diffuser material as set forth in Claim 1 wherein the bulk light diffuser material is in the form of a film or sheet.
- [c11] 11. The bulk light diffuser material as set forth in Claim 10 wherein the film or sheet material has a thickness of about 0.025 mm to about 0.5 mm.
- [c12] 12.The bulk light diffuser material as set forth in Claim 3 wherein the light diffusing particles have a gloss value according to ASTM standard D523 of less than about 50.
- [c13] 13.The bulk light diffuser material as set forth in Claim 3 wherein the light diffusing particles have a gloss value according to ASTM standard D523 of greater than about 90.
- [c14] 14.A backlight display device comprising:
 an optical source for generating light;
 a light guide for guiding the light therealong;
 a reflective device positioned along the light guide for reflecting the light out of the light guide; and

a bulk light diffuser material receptive of the light from the light guide, the bulk light diffuser material comprising:

about 95 to about 99.8 percent by weight of a polycarbonate and about 0.2 to about 5 percent by weight of light diffusing particles, based on the total weight of the polycarbonate and of the light diffusing particles;

wherein the bulk light diffuser material has a percent transmittance of at least 70% and a haze of at least 10% measured according to ASTM standard D 1003-00.

[c15] 15.The backlight display device as set forth in Claim 14 wherein the light diffusing particles comprise a poly(acrylate), a poly(alkyl methacrylate), a poly (tetrafluoroethylene), a silicone, zinc, antimony, titanium, barium or mixtures thereof, wherein the alkyl groups have one to about twelve carbon atoms.

[c16]16. The backlight display device as set forth in Claim 14 wherein the light diffusing particles comprise a poly(acrylate), a poly(alkyl methacrylate), a poly (tetrafluoroethylene), a silicone or mixtures thereof, wherein the alkyl groups have one to about twelve carbon atoms. 17. The backlight display device as set forth in Claim 15 wherein the poly(alkyl [c17] methacrylate) comprises poly(methyl methacrylate). [c18] 18. The backlight display device as set forth in Claim 15 wherein the silicone comprises hydrolyzed poly(alkyl trialkoxysilane). [c19]19. The backlight display device as set forth in Claim 14 wherein the light diffusing particles comprise zinc, antimony, titanium, barium or mixtures thereof. [c20]20. The backlight display device as set forth in Claim 14 wherein the light diffusing particles comprise zinc, antimony, titanium, barium or oxides or sulfides thereof. [c21] 21. The backlight display device as set forth in Claim 16 wherein the light diffusing particles have a mean particle size of about 1.0 micrometer to about 10.0 micrometers. [c22] 22.The backlight display device as set forth in Claim 16, wherein the light diffusing particles are present in an amount of about 2.2% to about 2.5%. [c23] 23. The backlight display device as set forth in Claim 14 wherein the bulk light diffuser material is in the form of a film or sheet. [c24]24.The backlight display device as set forth in Claim 23 wherein the film or sheet material has a thickness of about 0.025 mm to about 0.5 mm. [c25] 25. The backlight display device as set forth in Claim 16 wherein the light diffusing particles have a gloss value according to ASTM standard D523 of less than about 50. [c26]26. The backlight display device as set forth in Claim 16 wherein the light diffusing particles have a gloss value according to ASTM standard D523 of

greater than about 90.

- [c27] 27.The backlight display device as set forth in Claim 23 wherein the film or sheet includes a prismatic surface.
- [c28] 28.The backlight display device as set forth in Claim 23 wherein the film or sheet includes a planar surface.
- [c29] 29. The backlight display device as set forth in Claim 27 wherein the prismatic surface includes a prism structure having a peak angle, α , a height, h, a pitch, p, and a length, l.
- [c30] 30. The backlight display device as set forth in Claim 29 wherein the prism structure is at least psuedo-randomized in peak angle, α , height, h, pitch, p, and length, l.